

CLAIMS

1. A single-use surgical scalpel, comprising:
 - a) a molded plastic housing having an upper and a lower radiused edge, and ribbed interior wall surfaces, the ribbed interior wall surfaces of the molded plastic housing defining a channel for slidable engagement of a blade carrier, the channel comprising:
 - i) one open end through which a surgical blade is extended during use;
 - ii) a slot through the lower radiused edge for slidable engagement of an actuator/locking fin, the slot being adapted for retaining a blade carrier in a blade-extended position;
 - iii) a single-use indicator window; and
 - iv) a retaining element for engaging a distal end of a leaf spring; and
 - b) a molded plastic blade carrier comprising:
 - i) a first end adapted for engaging the surgical blade;
 - ii) a second end comprising a leaf spring to assist in blade retraction, the leaf spring having a proximal and a distal end; and
 - iii) a central portion comprising the actuator/locking fin and a single-use indicator.
2. The device of Claim 1 wherein at least one side of the first end of the molded plastic blade carrier is tapered to form a shimming plane at a position which contacts a portion of the ribbed interior wall surface of the channel, the taper resulting in increased thickness of the first end of the blade carrier when measured in the distal to proximate direction.

3. The device of Claim 2 wherein the end portion of one or more ribs of the ribbed interior wall surface of the channel which contacts the tapered portion of the blade carrier is molded to contain a complementary taper.
4. The device of Claim 1 wherein the single-use indicator on the molded plastic blade carrier comprises a flexible plastic convex element which is positioned in, and viewable through, the single-use indicator window in the molded plastic housing when the blade is in the retracted position, the convex plastic element being irreversibly altered when the blade carriage is advanced to expose the surgical blade.
5. The device of Claim 1 wherein the exterior walls of the molded plastic housing further comprise raised molded fins in critical gripping locations.
6. The device of Claim 1 further comprising a friction-fit or snap-on palm support.
7. The device of Claim 1 further comprising a high-intensity lighting system whereby light is emitted from a fiber optic strand positioned above the surgical blade in a blade-extended configuration.
8. The device of Claim 7 wherein the high-intensity lighting system includes an adjustable lens enabling focal adjustment of a light beam emitted from the fiber optic strand.
9. The device of Claim 1 wherein the molded plastic housing is a unitary construct, having a live hinge which defines the central line of the longitudinal axis in a hinge-open view.

10. The device of Claim 1 wherein the retaining element for engaging a distal end of a leaf spring comprises a molded boss which engages a ring formed on the distal end of the leaf spring.
11. A single-use surgical scalpel, comprising:
 - a) a molded plastic housing having an upper and a lower radiused edge, and ribbed interior walls surfaces, the ribbed interior wall surfaces of the molded plastic housing defining a channel for slidable engagement of a blade carrier, the channel comprising:
 - i) one open end through which a surgical blade is extended during use;
 - ii) a slot through the lower radiused edge for slidable engagement of an actuator/locking fin, the slot being adapted for retaining a blade carrier in a blade-extended position; and
 - iii) a single-use indicator window; and
 - b) a molded plastic blade carrier comprising:
 - i) a first end adapted for engaging the surgical blade;
 - ii) a second end comprising a leaf spring to assist in blade retraction, the leaf spring having a proximal and a distal end, the distal end of the leaf spring being joined to the housing by a live hinge; and
 - iii) a central portion comprising the actuator/locking fin and a single-use indicator.

12. The device of Claim 11 wherein at least one side of the first end of the molded plastic blade carrier is tapered to form a shimming plane at a position which contacts a portion of the ribbed interior wall surface of the channel, the taper resulting in increased thickness of the first end of the blade carrier when measured in the distal to proximate direction.
13. The device of Claim 12 wherein the end portion of one or more ribs of the ribbed interior wall surface of the channel which contacts the tapered portion of the blade carrier is molded to contain a complementary taper.
14. The device of Claim 11 wherein the single-use indicator on the molded plastic blade carrier comprises a flexible plastic convex element which is positioned in, and viewable through, the single-use indicator window in the molded plastic housing when the blade is in the retracted position, the convex plastic element being irreversibly altered when the blade carriage is advanced to expose the surgical blade.
15. The device of Claim 11 wherein the exterior walls of the molded plastic housing further comprise raised molded fins in critical gripping locations.
16. The device of Claim 11 further comprising a friction-fit or snap-on palm support.
17. The device of Claim 11 further comprising a high-intensity lighting system whereby light is emitted from a fiber optic strand positioned above the surgical blade in a blade-extended configuration.

18. The device of Claim 17 wherein the high-intensity lighting system includes an adjustable lens enabling focal adjustment of a light beam emitted from the fiber optic strand.
19. The device of Claim 11 wherein the molded plastic housing is a unitary construct, having a live hinge which defines the central line of the longitudinal axis in a hinge-open view.